Metabolic alkalosis

↑↑↑ HCO_3^- ↓ > 7.45

Two Causes

1) Loss of H^+ ions

1) Vomiting → Acidic loss in stomach (H^+ ions) & ↑ HCO_3^- by pancreas in the Blood

2) ↑↑↑ Aldosterone → Hypokalemia & Hypernatremia
↳ ↓↓ H^+ in and ↑↑↑ HCO_3^- in blood.

2) Increase of HCO_3^- ions

1) Loop Diuretics, Thiazide Diuretics.

2) ↑↑ Absorption By kidneys (Hypokalemia)
↳ Renin-Angiotensin & Aldosterone mechanism.
↳ Kidney retain water & HCO_3^-

3) ↑↑ Antacids to neutralize stomach acids.
↳ So Excess bicarbonate by pancreas → ↑↑ HCO_3^-.

Compensatory

1) Moving H^+ ions from cell into blood from cells
↳ Hypokalemia.
- Not in other ~~acid~~ organic.

2) Respiratory system.
→ Chemoreceptors in carotic & aortic → ↓↑ PH → Respiratory centre in medulla
↓↓ PH ← ↑↑↑ PCO_2 ← ↓↓ Minute ventilation ← ↓↓ RR & depth

3) If Not by kidney → Excrete more HCO_3^- ions & reabsorb more H^+ ions.

Clinical features - Of Underlying Cause

Investigation

① PCO_2 > 45 mm of Hg. - ABG.

② Electrolyte → (↑↑↑ HCO_3 → , Na, Cl.) ; ↓ K.

③ ~~ABG~~.